

On Scientific Knowledge

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The Philosophy of G W F Hegel.

-- Course Reader --

Preface to the Phenomenology: On scientific knowledge

Part II

Stanzas 38-72

11. In what way the Phenomenology of the Spirit is negative or contains what is false

38. Now, because the systematic statement of the mind's experience embraces merely its ways of appearing, it may well seem that the advance from that to the science of ultimate truth in the form of truth is merely negative; and we might readily be content to dispense with the negative process as something altogether false, and might ask to be taken straight to the truth at once: why meddle with what is false at all? The point formerly raised, that we should have begun with science at once, may be answered here by considering the character of negativity in general regarded as something false. The usual ideas on this subject particularly obstruct the approach to the truth. The consideration of this point will give us an opportunity to speak about mathematical knowledge, which non-philosophical knowledge looks upon as the ideal which philosophy ought to try to attain, but has so far striven in vain to reach.

39. Truth and falsehood as commonly understood belong to those sharply defined ideas which claim a completely fixed nature of their own, one standing in solid isolation on this side, the other on that, without any community between them. Against that view it must be pointed out, that truth is not like stamped coin that is

issued ready from the mint and so can be taken up and used. Nor, again, is there something false, any more than there is something evil. Evil and falsehood are indeed not so bad as the devil, for in the form of the devil they get the length of being particular subjects; *qua* false and evil they are merely universals, though they have a nature of their own with reference to one another. Falsity (that is what we are dealing with here) would be *otherness*, the negative aspect of the substance, which [substance], *qua* content of knowledge, is truth. But the substance is itself essentially the negative element, partly as involving distinction and determination of content, partly as being a process of distinguishing pure and simple, i.e. as being self and knowledge in general. Doubtless we can know in a way that is false. To know something falsely means that knowledge is not adequate to, is not on equal terms with, its substance. Yet this very dissimilarity is the process of distinction in general, the essential moment in knowing. It is, in fact, out of this active distinction that its harmonious unity arises, and this identity, when arrived at, is truth. But it is not truth in a sense which would involve the rejection of the discordance, the diversity, like dross from pure metal; nor, again, does truth remain detached from diversity, like a finished article from the instrument that shapes it. Difference itself continues to be an immediate element within truth as such, in the form of the principle of negation, in the form of the activity of Self. All the same, we cannot for that reason say that falsehood is a moment or forms even a constituent part of truth. That "in every case of falsity there is something true" is an expression in which they are taken to be like oil and water, which do not mix and are merely united externally. Just in the interest of their real meaning, precisely because we want to designate the aspect or moment of complete otherness, the terms true and false must no longer be used where their otherness has been cancelled and superseded. Just as the expressions "unity of subject and object", of "finite and infinite", of "being and thought", etc., are clumsy when subject and object, etc., are taken to mean what they are *outside* their unity, and are thus in that unity not meant to be what its very expression conveys; in the same way falsehood is not, *qua* false, any longer a moment of truth.

40. Dogmatism as a way of thinking, whether in ordinary knowledge or in the study of philosophy, is nothing else but the view that truth consists in a proposition, which is a fixed and final result, or again which is directly known. To questions like, "When was Caesar born?". "How many feet make a furlongs", etc., a straight answer ought to be given; just as it is absolutely true that the square of the hypotenuse is equal to the sum of the squares of the other two sides of a right-angled triangle. But the nature of a so-called truth of that sort is different from the nature of philosophical truth.

12. Historical and mathematical truth

41. As regards truth in matters of historical fact - to deal briefly with this subject - so far as we consider the purely historical element, it will be readily granted that they have to do with the sphere of particular existence, with a content in its contingent and arbitrary aspects, features that have no necessity. But even bare truths of the kind, say, like those mentioned, are impossible without the activity of self-consciousness. In order to know any one of them, there has to be a good deal of comparison, books must be consulted, or in some way or other inquiry has to be made. Even in a case of direct perception, only when we know it along with the reasons behind it, is it held to be something of real value; although it is merely the naked fact itself that we are, properly speaking, supposed to be concerned about.

42. As to mathematical truths, we should be still less inclined to consider anyone a geometer who had got Euclid's theorems by heart (*auswendig*) without knowing the proofs, without, if we may say so by way of contrast, getting them into his head (*inwendig*). Similarly, if anyone came to know by measuring many right-angled triangles that their sides are related in the way everybody knows, we should regard knowledge so obtained as unsatisfactory. All the same, while proof is essential in the case of mathematical knowledge, it still does not have the significance and nature of being a moment in the result itself; the proof is over when we get the result, and has disappeared. *Qua* result the theorem is, no doubt, one that is seen to be true. But this eventuality has nothing to do with its content, but only with its relation to the knowing subject. The process of mathematical proof does not belong to the object; it is a function that takes place outside the matter in hand. Thus, the nature of a right-angled triangle does not break itself up into factors in the manner set forth in the mathematical construction which is required to prove the proposition expressing the relation of its parts. The entire process of producing the result is an affair of knowledge which takes its own way of going about it. In philosophical knowledge, too, the way existence, *qua* existence, comes about (*Werden*) is different from that whereby the essence or inner nature of the fact comes into being. But philosophical knowledge, for one thing, contains both, while mathematical knowledge sets forth merely the way an existence comes about, i.e. the way the nature of the fact gets to be in the sphere of knowledge as such. For another thing, too, philosophical knowledge unites both these particular movements. The inward rising into being, the process of substance, is an unbroken transition into outwardness, into existence or being for another; and conversely, the coming of existence into being is withdrawal into the inner essence. The movement is the twofold process in which the whole comes to be, and is such that each at the same time posits the other, and each on that account has in it both as

its two aspects. Together they make the whole, through their resolving each other, and making themselves into moments of the whole.

43. In mathematical knowledge the insight required is an external function so far as the subject-matter dealt with is concerned. It follows that the actual fact is thereby altered. The means taken, construction and proof, contain, no doubt, true propositions; but all the same we are bound to say that the content is false. The triangle in the above example is taken to pieces, and its parts made into other figures to which the construction in the triangle gives rise. It is only at the end that we find again reinstated the triangle we are really concerned with; it was lost sight of in the course of the construction, and was present merely in fragments, that belonged to other wholes. Thus we find negativity of content coming in here too, a negativity which would have to be called falsity, just as much as in the case of the movement of the notion where thoughts that are taken to be fixed pass away and disappear.

44. The real defect of this kind of knowledge, however, affects its process of knowing as much as its material. As to that process, in the first place we do not see any necessity in the construction. The necessity does not arise from the nature of the theorem: it is imposed; and the injunction to draw just these lines, an infinite number of others being equally possible, is blindly acquiesced in, without our knowing anything further, except that, as we fondly believe, this will serve our purpose in producing the proof. Later on this design then comes out too, and is therefore merely external in character, just because it is only after the proof is found that it comes to be known. In the same way, again, the proof takes a direction that begins anywhere we like, without our knowing as yet what relation this beginning has to the result to be brought out. In its course, it takes up certain specific elements and relations and lets others alone, without its being directly obvious what necessity there is in the matter. An external purpose controls this process.

45. The evidence peculiar to this defective way of knowing - an evidence on the strength of which mathematics plumes itself and proudly struts before philosophy - rests solely on the poverty of its purpose and the defectiveness of its material, and is on that account of a kind that philosophy must scorn to have anything to do with. Its purpose or principle is quantity. This is precisely the relationship that is non-essential, alien to the character of the notion. The process of knowledge goes on, therefore, on the surface, does not affect the concrete fact itself, does not touch its inner nature or lotion, and is hence not a conceptual way of comprehending. The material which provides mathematics with these welcome treasures of truth

consists of space and numerical units (*das Eins*). Space is that kind of existence wherein the concrete notion inscribes the diversity it contains, as in an empty, lifeless element in which its differences likewise subsist in passive, lifeless form. What is concretely actual is not something spatial, such as is treated of in mathematics. With unrealities like the things mathematics takes account of, neither concrete sensuous perception nor philosophy has anything to do. In an unreal element of that sort we find, then, only unreal truth, fixed lifeless propositions. We can call a halt at any of them; the next begins of itself *de novo*, without the first having led up to the one that follows, and without any necessary connection having in this way arisen from the nature of the subject-matter itself. So, too - and herein consists the formal character of mathematical evidence because of that principle and the element where it applies, knowledge advances along the lines of bare equality, of abstract identity. For what is lifeless, not being self-moved, does not bring about distinction within its essential nature; does not attain to essential opposition or unlikeness; and hence involves no transition of one opposite element into its other, no qualitative, immanent movement, no self-movement. It is quantity, a form of difference that does not touch the essential nature, which alone mathematics deals with. It abstracts from the fact that it is the notion which separates space into its dimensions, and determines the connections between them and in them. It does not consider, for example, the relation of line to surface, and when it compares the diameter of a circle with its circumference, it runs up against their incommensurability, i.e. a relation in terms of the notion, an infinite element, that escapes mathematical determination.

46. Immanent or so-called pure mathematics, again, does not oppose time *qua* time to space, as a second subject-matter for consideration. Applied mathematics, no doubt, treats of time, as also of motion, and other concrete things as well; but it picks up from experience synthetic propositions - i.e. statements of their relations, which are determined by their conceptual nature - and merely applies its formulae to those propositions assumed to start with. That the so-called proofs of propositions like that concerning the equilibrium of the lever, the relation of space and time in gravitation, etc., which applied mathematics frequently gives, should be taken and given as proofs, is itself merely a proof of how great the need is for knowledge to have a process of proof, seeing that, even where proof is not to be had, knowledge yet puts a value on the mere semblance of it, and gets thereby a certain sense of satisfaction. A criticism of those proofs would be as instructive as it would be significant, if the criticism could strip mathematics of this artificial finery, and bring out its limitations, and thence show the necessity for another type of knowledge.

As to time, which, it is to be presumed, would, by way of the counterpart to space,

constitute the object-matter of the other division of pure mathematics, this is the notion itself in the form of existence. The principle of quantity, of difference which is not determined by the notion, and the principle of equality, of abstract, lifeless unity, are incapable of dealing with that sheer restlessness of life and its absolute and inherent process of differentiation. It is therefore only in an arrested, paralysed form, only in the form of the quantitative unit, that this essentially negative activity becomes the second object-matter of this way of knowing, which, itself an external operation, degrades what is self-moving to the level of mere matter, in order thus to get an indifferent, external, lifeless content.

13. The nature of philosophical truth and its method

47. Philosophy, on the contrary, does not deal with a determination that is non-essential, but with a determination so far as it is an essential factor. The abstract or unreal is not its element and content, but the real, what is self-establishing, has life within itself, existence in its very notion. It is the process that creates its own moments in its course, and goes through them all; and the whole of this movement constitutes its positive content and its truth. This movement includes, therefore, within it the negative factor as well, the element which would be named falsity if it could be considered one from which we had to abstract. The element that disappears has rather to be looked at as itself essential, not in the sense of being something fixed, that has to be cut off from truth and allowed to lie outside it, heaven knows where; just as similarly the truth is not to be held to stand on the other side as an immovable lifeless positive element. Appearance is the process of arising into being and passing away again, a process that itself does not arise and does not pass away, but is *per se*, and constitutes reality and the life-movement of truth. The truth is thus the bacchanalian revel, where not a member is sober; and because every member no sooner becomes detached than it *eo ipso* collapses straightway, the revel is just as much a state of transparent unbroken calm. Judged by that movement, the particular shapes which mind assumes do not indeed subsist any more than do determinate thoughts or ideas; but they are, all the same, as much positive and necessary moments, as negative and transitory. In the entirety of the movement, taken as an unbroken quiescent whole, that which obtains distinctness in the course of its process and secures specific existence, is preserved in the form of a self-recollection, in which existence is self-knowledge, and self-knowledge, again, is immediate existence.

48. It might well seem necessary to state at the outset the chief points in connection with the method of this process, the way in which science operates. Its nature, however, is to be found in what has already been said, while the proper

systematic exposition of it is the special business of Logic, or rather is Logic itself. For the method is nothing else than the structure of the whole in its pure and essential form. In regard, however, to what has been hitherto currently held on this point, we must be sensible that the system of ideas bearing on the question of philosophical method, belongs also to a stage of mental culture that has now passed away. This may perhaps seem somewhat boastful or revolutionary; and I am far from adopting an attitude of that sort; but it is significant that the scientific régime bequeathed by mathematics - a régime of explanations, divisions, axioms, an array of theorems, with proofs, principles, and the consequences and conclusions drawn from them - all this has already come to be generally considered as at any rate out of date. Even though there is no clear idea why it is unsuitable, yet little or no use is made of it any longer; and even though it is not condemned outright, it is all the same not in favour. And we must be so far prejudiced in favour of what is excellent to believe that it can turn itself to practical account, and make itself acceptable. But it is not difficult to see that the method of propounding a proposition, producing reasons for it and then refuting its opposite by reasons too, is not the form in which truth can appear. Truth moves itself by its very nature; but the method just mentioned is a form of knowledge external to its material. Hence it is peculiar to mathematics and must be left to mathematics, which, as already indicated, takes for its principle the relation of quantity, a relation alien to the notion, and gets its material from lifeless space, and the equally lifeless numerical unit. Or, again, such a method, adopting a freer style, one involving more of arbitrariness and chance, may have a place in ordinary life, in a conversation, or in supplying matter-of-fact instruction for the satisfaction of curiosity rather than knowledge, very much as a preface does. In every-day life the mind finds its content in different kinds of knowledge, experiences of various sorts, concrete facts of sense, thoughts, too, and principles, and, in general, in whatever lies ready to hand, or passes for a solid stable entity, or real being. The mind follows wherever this leads, sometimes interrupting the connection by an unrestrained caprice in dealing with the content, and takes up the attitude of determining and handling it in quite an external fashion. It runs the content back to some touchstone of certainty or other, even though it be but the feeling of the moment; and conviction is satisfied if it reaches some familiar resting-place.

49. But when the necessity of the notion banishes from its realm the loose procedure of the “raisonnements” of conversation, as well as the pedantic style of scientific pomposity, its place, as we have already mentioned, must not be taken by the disconnected utterance of presageful surmise and inspiration, and the arbitrary caprice of prophetic utterance; for this does not merely despise that particular form of scientific procedure, but contemns scientific procedure altogether.

14. Against schematizing formalism

50. Now that the triplicity, adopted in the system of Kant - a method rediscovered, to begin with, by instinctive insight, but left lifeless and uncomprehended - has been raised to its significance as an absolute method, true form is thereby set up in its true content, and the conception of science has come to light. But the use this form has been put to in certain quarters has no right to the name of science. For we see it there reduced to a lifeless schema, to nothing better than a mere shadow, and scientific organization to a synoptic table. This formalism - about which we spoke before in general terms, and whose procedure we wish here to state more fully - thinks it has comprehended and expressed the nature and life of a given form when it proclaims a determination of the schema to be its predicate. The predicate may be subjectivity or objectivity, or again magnetism, electricity, and so on, contraction or expansion, East or West, and such like - a form of predication that can be multiplied indefinitely, because according to this way of working each determination, each mode, can be applied as a form or schematic element in the case of every other, and each will thankfully perform the same service for any other. With a circle of reciprocities of this sort it is impossible to make out what the real fact in question is, or what the one or the other is. We find there sometimes constituents of sense picked up from ordinary intuition, determinate elements which to be sure should mean something else than they say; at other times what is inherently significant, viz. pure determinations of thought-like subject, object, substance, cause, universality, etc. - these are applied just as uncritically and unreflectingly as in every-day life, are used much as people employ the terms strong and weak, expansion and contraction. As a result that type of metaphysics is as unscientific as those ideas of sense.

51. Instead of the inner activity and self-movement of its own actual life, such a simple determination of direct intuition (*Anschauung*) - which means here sense-knowledge - is predicated in accordance with a superficial analogy, and this external and empty application of the formula is called "construction". The same thing happens here, however, as in the case of every kind of formalism. A man's head must be indeed dull if he could not in a quarter of an hour get up the theory that there are enervating, innervating, and indirectly enervating diseases and as many cures, and who could not - since not so long ago instruction of that sort sufficed for the purpose - in as short a time be turned from being a man who works by rule of thumb into a theoretical physician. Formalism in the case of speculative Philosophy of Nature (*Naturphilosophie*) takes the shape of teaching that understanding is electricity, animals are nitrogen, or equivalent to South or North and so on. When it does this, whether as badly as it is here expressed or even concocted with more

terminology, such forceful procedure brings and holds together elements to all appearance far removed from one another; the violence done to stable inert sense-elements by connecting them in this way, confers on them merely the semblance of a conceptual unity, and spares itself the trouble of doing what is after all the important thing - expressing the notion itself, the meaning that underlies sense-ideas. All this sort of thing may strike anyone who has no experience with admiration and wonder. He may be awed by the profound genius he thinks it displays, and be delighted at the happy ingenuity of such characterisations, since they fill the place of the abstract notion with something tangible and sensuous, and so make it more pleasing; and he may congratulate himself on feeling an instinctive mental affinity for that glorious way of proceeding. The trick of wisdom of that sort is as quickly acquired as it is easy to practise. Its repetition, when once it is familiar, becomes as boring as the repetition of any bit of sleight-of-hand once we see through it. The instrument for producing this monotonous formalism is no more difficult to handle than the palette of a painter, on which lie only two colours, say red and green, the former for colouring the surface when we want a historical piece, the latter when we want a bit of landscape. It would be difficult to settle which is greater in all this, the agreeable ease with which everything in heaven and earth and under the earth is plastered with that botch of colour, or the conceit that prides itself on the excellence of its means for every conceivable purpose; the one lends support to the other. What results from the use of this method of sticking on to everything in heaven and earth, to every kind of shape and form, natural and spiritual, the pair of determinations from the general schema, and filing everything in this manner, is no less than an "account as clear as noonday" of the organised whole of the universe. It is, that is to say, a synoptic index, like a skeleton with tickets stuck all over it, or like the rows of boxes kept shut and labelled in a grocer's stall; and is as intelligible as either the one or the other. It has lost hold of the living nature of concrete fact; just as in the former case we have merely dry bones with flesh and blood all gone, and in the latter, there is shut away in those boxes something equally lifeless too. We have already remarked that the final outcome of this style of thinking is, at the same time, to paint entirely in one kind of colour; for it turns with contempt from the distinctions in the schematic table, looks on them as belonging to the activity of mere reflection, and lets them drop out of sight in the void of the Absolute, and there reinstates pure identity, pure formless whiteness. Such uniformity of colouring in the schema with its lifeless determinations, this absolute identity, and the transition from one to the other - these are the one as well as the other, the expression of inert lifeless understanding, and equally an external process of knowledge.

52. Not only can what is excellent not escape the fate of being thus devitalised and despiritualised and excoriated of seeing its skin paraded about by lifeless

knowledge and the conceit such knowledge engenders; but rather, such a fate lets us realise the power the “excellent” exercises over the heart (*Gemüth*), if not over the mind (*Geist*). Moreover, we recognise thereby, too, the constructive unfolding into universality and determinateness of form which marks the complete attainment of excellence, and which alone makes it possible that this universality can be turned to superficial uses.

53. Science can become an organic system only by the inherent life of the notion. In science the determinateness, which was taken from the schema and stuck on to existing facts in external fashion, is the self directing inner soul of the concrete content. The movement of what is partly consists in becoming another to itself, and thus developing explicitly into its own immanent content; partly, again, it takes this evolved content, this existence it assumes, back into itself, i.e. makes itself into a moment, and reduces itself to simple determinateness. In the first stage of the process negativity lies in the function of distinguishing and establishing existence; in this latter return into self, negativity consists in the bringing about of determinate simplicity. It is in this way that the content shows its specific characteristic not to be received from something else, and stuck on externally; the content gives itself this determinate characteristic, appoints itself of its own initiative to the rank of a moment and to a place in the whole. The pigeon-holing process of understanding retains for itself the necessity and the notion controlling the content, that which constitutes the concrete element, the actuality and living process of the subject-matter which it labels: or rather, understanding does not retain this for itself, on the contrary, understanding fails to know it. For if it had as much insight as that, it would surely show that it had. It is not even aware of the need for such insight; if it were, it would drop its schematizing process, or at least would no longer be satisfied to know by way of a mere table of contents. A table of contents is all that understanding gives, the content itself it does not furnish at all.

If the specific determination (say even one like magnetism) is one that in itself is concrete or actual, it all the same gets degraded into something lifeless and inert, since it is merely predicated of another existing entity, and not known as an immanent living principle of this existence; nor is there any comprehension of how in this entity its intrinsic and peculiar way of expressing and producing itself takes effect. This, the very kernel of the matter, formal understanding leaves to others to add later on. Instead of making its way into the inherent content of the matter in hand, understanding always takes a survey of the whole, assumes a position above the particular existence about which it is speaking, i.e. it does not see it at all.

True scientific knowledge, on the contrary, demands abandonment to the very life

of the object, or, which means the same thing, claims to have before it the inner necessity controlling the object, and to express this only. Steeping itself in its object, it forgets to take that general survey, which is merely a turning of knowledge away from the content back into itself. But being sunk into the material in hand, and following the course that such material takes, true knowledge returns back into itself, yet not before the content in its fullness is taken into itself, is reduced to the simplicity of being a determinate characteristic, drops to the level of being one aspect of an existing entity, and passes over into its higher truth. By this process the whole as such, surveying its entire content, itself emerges out of the wealth wherein its process of reflection seemed to be lost.

54. In general, in virtue of the principle that, as we expressed it before, substance is implicitly and in itself subject, all content makes its reflection into itself in its own special way. The subsistence or substance of anything that exists is its self-identity; for its want of identity, or oneness with itself, would be its dissolution. But self-identity is pure abstraction; and this is just thinking. When I say Quality, I state simple determinateness; by means of its quality one existence is distinguished from another or is an "existence"; it is for itself, something on its own account, or subsists with itself because of this simple characteristic. But by doing so it is essentially Thought.

Here we find contained the principle that Being is Thought: here is exercised that insight which usually tends to deviate from the ordinary non-conceptual way of speaking of the identity of thought and being. In virtue, further, of the fact that subsistence on the part of what exists is self-identity or pure abstraction, it is the abstraction of itself from itself, in other words, is itself its own want of identity with itself and dissolution - its own proper inwardness and retraction into self - its process of becoming.

Owing, to the nature which being thus has, and so far as what is has this nature from the point of view of knowledge, this thinking is not an activity which treats the content as something alien and external; it is not reflection into self away from the content. Science is not that kind of Idealism which stepped into the place of the Dogmatism of mere assertion and took the shape of a Dogmatism of mere assurance, the Dogmatism of mere self-certainty. Rather, since knowledge sees the content go back into its own proper inner nature, the activity of knowledge is absorbed in that content - for it (the activity) is the immanent self of the content - and is also at the same time returned into itself, for this activity is pure self-identity in otherness. In this way the knowing activity is the artful device which, while seeming to refrain from activity, looks on and watches how specific

determinateness with its concrete life, just where it believes it is working out its own self-preservation and its own private interest, is, in point of fact, doing the very opposite, is doing what brings about its own dissolution and makes itself a moment in the whole.

55. While, in the foregoing, the significance of Understanding was stated from the point of view of the self-consciousness of substance; by what has been here stated we can see clearly its significance from the point of view of substance *qua* being. Existence is Quality, self-identical determinateness, or determinate simplicity, determinate thought: this is existence from the point of view of Understanding. On this account it is ? ? ? ? ? , as Anaxagoras first thought reality to be. Those who succeeded him grasped the nature of existence in a more determinate way as ? ? ? ? ? or *Idea*, i.e. as determinate or specific universality, kind or species. The term species or kind seems indeed too ordinary and inadequate for Ideas, for beauty, holiness, eternal, which are the vogue in these days. As a matter of fact, however, idea means neither more nor less than kind, species. But we often find nowadays that a term which exactly designates a conception is despised and rejected, and another preferred to it which hides and obscures the conception, and thus sounds more edifying, even though this is merely due to its being expressed in a foreign language.

Precisely for the reason that existence is designated a species or kind, it is naked simple thought: ? ? ? ? ? , simplicity, is substance. It is on account of its simplicity, its self-identity, that it appears steady, fixed, and permanent. But this self-identity is likewise negativity; hence that fixed and stable existence carries the process of its own dissolution within itself. The determinateness appears at first to be so solely through its relation to something else; and its process seems imposed and forced upon it externally. But its having its own otherness within itself, and the fact of its being a self-initiated process - these are implied in the very simplicity of thought itself. For this is self-moving thought, thought that distinguishes, is inherent inwardness, the pure notion. Thus, then, it is the very nature of understanding to be a process; and being a process it is Rationality.

56. In the nature of existence as thus described - to be its own notion and being in one - consists logical necessity in general. This alone is what is rational, the rhythm of the organic whole: it is as much knowledge of content as that content is notion and essential nature. In other words, this alone is the sphere and element of speculative thought. The concrete shape of the content is resolved by its' own inherent process into a simple determinate quality. Thereby it is raised to logical form, and its being and essence coincide; its concrete existence is merely this

process that takes place, and is *eo ipso* logical existence. It is therefore needless to apply a formal scheme to the concrete content in an external fashion; the content is in its very nature a transition into a formal shape, which, however, ceases to be formalism of an external kind, because the form is the indwelling process of the concrete content itself.

57. This nature of scientific method, which consists partly in being inseparable from the content, and partly in determining the rhythm of its movement by its own agency, finds, as we mentioned before, its peculiar systematic expression in speculative philosophy. What is here stated describes in effect the essential principle; but cannot stand for more at this stage than an assertion or assurance by way of anticipation. The truth it contains is not to be found in this exposition, which is in part historical in character. And just for that reason, too, it is not in the least refuted if anyone assures us on the contrary that this is not so, that the process instead is here so and so; if ideas we are all used to, being truths accepted or settled and familiar to everyone, are brought to mind and recounted; or, again, if something new is served up and Guaranteed as coming from the inner sanctuaries of inspired intuition.

58. Such a view is bound to meet with opposition. The first instinctive reaction on the part of knowing, when offered something that was unfamiliar, is usually to resist it. It seeks by that means to save freedom and native insight, to secure its own inherent authority against alien authority - for that is the way anything apprehended for the first time appears. This attitude is adopted, too, in order to do away with the semblance of a kind of disgrace which would lie in the fact that something has had to be learnt. In like manner, again, when the unfamiliar or unknown is received with applause, the reaction is in the same way an exaltation of freedom and native authority. It consists in something analogous to ultra-revolutionary declamation and action.

15. The demands of the study of philosophy

Hence the important thing for the student of science is to make himself undergo the strenuous toil of conceptual reflection, of thinking in the form of the notion. This demands concentrated attention on the notion as such, on simple and ultimate determinations like being-in-itself, being-for-itself, self-identity, and so on; for these are elemental, pure, self-determined functions of a kind we might call souls, were it not that their conceptual nature denotes something higher than that term contains. The interruption by conceptual thought of the habit of always thinking in figurative

ideas (*Vorstellungen*) is as annoying and troublesome to this way of thinking as to that process of formal intelligence which in its reasoning rambles about with no real thoughts to reason with. The former, the habit, may be called materialised thinking, a fortuitous mental state, one that is absorbed in what is material, and hence finds it very distasteful at once to lift its self clear of this matter and be with itself alone. The latter, the process of *raisonnement*, is, on the other hand, detachment from all content, and conceited superiority to it. What is wanted here is the effort and struggle to give up this kind of freedom, and instead of being a merely arbitrary principle directing the content anyhow, this freedom should sink into and pervade the content, should let it be directed and controlled by its own proper nature, i.e. by the self as its own self. and should observe this process taking place. We must abstain from interrupting the immanent rhythm of the movement of conceptual thought; we must refrain from arbitrarily interfering with it, and introducing ideas and reflections that have been obtained elsewhere. Restraint of this sort is itself an essential condition of attending to and getting at the real nature of the notion.

16. Argumentative thinking in its negative attitude -

59. There are two aspects in the case of that ratiocinative procedure which mark its contrast from conceptual thinking and call for further notice. *Raisonnement*, in the first place, adopts a negative attitude towards the content apprehended; knows how to refute it and reduce it to nothingness. To see what the content is *not* is merely a negative process; it is a dead halt, which does not of itself go beyond itself, and proceed to a new content; it has to get hold of something else from somewhere or other in order to have once more a content. It is reflection upon and into the empty ego, the vanity of its own knowledge. Conceit of this kind brings out not only that this content is vain and empty, but also that to see this is itself fatuity too: for it is negation with no perception of the positive element within it. In that this reflection does not even have its own negativity as its content, it is not inside actual fact at all, but for ever away outside it. On that account it imagines that by asserting mere emptiness it is going much farther than insight that embraces and reveals a wealth of content. On the other hand, in the case of conceptual thinking, as was above indicated, the negative aspect falls within the content itself, and is the positive substance of that content, as well as being its inherent character and moving principle as by being the entirety of what these are. Looked at as a result, it is determinate specific negation, the negative which is the outcome of this process, and consequently is a positive content as well.

17. - in its positive attitude; its subject

60. In view of the fact that ratiocinative thinking has a content, whether of images or thoughts or a mixture of both, there is another side to its process which makes conceptual comprehension difficult for it. The peculiar nature of this aspect is closely connected with the essential meaning of the idea above described, in fact, expresses the idea in the way this appears as the process of thinking apprehension. For just as ratiocinative thinking in its negative reference, which we have been describing, is nothing but the self into which the content returns; in the same way, on the other hand, in its positive cognitive process the self is an ideally presented subject to which the content is related as an accident and predicate. This subject constitutes the basis to which the content is attached and on which the process moves to and fro. Conceptual thinking goes on in quite a different way. Since the concept or notion is the very self of the object, manifesting itself as the development of the object, it is not a quiescent subject, passively supporting accidents: it is a self-determining active concept which takes up its determinations and makes them its own. In the course of this process that inert passive subject really disappears; it enters into the different constituents and pervades the content; instead of remaining in inert antithesis to determinateness of content, it constitutes, in fact, that very specificity, i.e. the content as differentiated along with the process of bringing this about. Thus the solid basis, which ratiocination found in an inert subject, is shaken to its foundations, and the only object is this very movement of the subject. The subject supplying the concrete filling to its own content ceases to be something transcending. this content, and cannot have further predicates or accidents. Conversely, again, the scattered diversity of the content is brought under the control of the self, and so bound together; the content is not a universal that can be detached from the subject, and adapted to several indifferently. Consequently the content is in truth no longer predicate of the subject; it is the very substance, is the inmost reality, and the very principle of what is being considered. Ideational thinking (*vorstellen*), since its nature consists in dealing with accidents or predicates, and in exercising the right to transcend them because they are nothing more than predicates and accidents - this way of thinking is checked in its course, since that which has in the proposition the form of a predicate is itself the substance of the statement. It is met by a counter-thrust, as we may say. Starting from the subject, as if this were a permanent base on which to proceed, it discovers, by the predicate being in reality the substance, that the subject has passed into the predicate, and has thereby ceased to be subject: and since in this way what seems to be predicate has become the entire mass of the content, whole and complete, thinking cannot wander and ramble about at will, but is restrained and controlled by this weight of content.

Usually the subject is first set down as the fixed and objective self; from this fixed

position the necessary process passes on to the multiplicity of determinations or predicates. Here the knowing ego takes the place of that subject and is the function of knitting or combining the predicates one with another, and is the subject holding them fast. But since the former subject enters into the determinate constituents themselves, and is their very life, the subject in the second case - viz. the knowing subject - finds that the former, which it is supposed to be done with and which it wants to transcend, in order to return into itself, - is still there in the predicate: and instead of being able to be the determining agency in the process of resolving the predicate - reflectively deciding whether this or that predicate should be attached to the former subject - it has really to deal with the self of the content, is not allowed to be something on its own account (*für sich*), but has to exist along with this content.

61. What has been said can be expressed in a formal manner by saying that the nature of judgment or the proposition in general, which involves the distinction of subject and predicate, is subverted and destroyed by the speculative judgment; and the identical proposition, which the former becomes [by uniting subject and predicate], implies the rejection and repudiation of the above relation between subject and predicate. This conflict between the form of a proposition in general and the unity of the notion which destroys that form, is similar to what we find between metre and accent in the case of rhythm. Rhythm is the result of what hovers between and unites both. So in the case of the speculative or philosophical judgment; the identity of subject and predicate is not intended to destroy their distinction, as expressed in propositional form; their unity is to arise as a harmony of the elements. The form of the judgment is the way the specific sense appears, or is made manifest, the accent which differentiates the meaning it contains: that the predicate expresses the substance, and the subject itself falls within the universal, is however the unity wherein that accent dies away.

62. To explain what has been said by examples let us take the proposition God is Being. The predicate is "being": it has substantive significance, and thus absorbs the meaning of the subject within it. Being is meant to be here not predicate but the essential nature. Thereby, God seems to cease to be what he was when the proposition was put forward, viz. a fixed subject. Thinking [i.e. ordinary reflection], instead of getting any farther with the transition from subject to predicate, in reality finds its activity checked through the loss of the subject, and it is thrown back on the thought of the subject because it misses this subject. Or again, since the predicate has itself been pronounced to be a subject, to be the being, to be the essential reality, which exhausts the nature of the subject, thinking finds the subject directly present in the predicate too: and now, instead of having, in the predicate, gone into *itself*, and preserved the freedom characteristic of ratiocination, it is

absorbed in the content all the while, or, at any rate is required to be so.

Similarly when it is said: “the real is the universal”, the real, *qua* subject, passes away in its predicate. The universal is not only meant to have the significance of a predicate, as if the proposition stated that the real is universal: the universal is meant to express the essential nature of the real. Thinking therefore loses that fixed objective basis which it had in the subject, just as much as in the predicate it is thrown back on the subject, and therein returns not into itself but into the subject underlying the content.

63. This unaccustomed restraint imposed upon thought is for the most part the cause of the complaints concerning the unintelligibility of philosophical writings, when otherwise the individual has in him the requisite mental cultivation for understanding them. In what has been said we see the reason for the specific charge often made against them, that a good deal has to be read repeatedly before it can be understood - an accusation which is meant to convey something improper in the extreme, and one which if granted to be sound admits of no further reply. It is obvious from the above what is the state of the case here. The philosophical proposition, being a proposition, calls up the accepted view of the usual relation of subject and predicate, and suggests the idea of the customary procedure which takes place in knowledge. Its philosophical content destroys this way of proceeding and the ordinary view taken of this process. The common view discovers that the statement is intended in another sense than it is thinking of, and this correction of its opinion compels knowledge to recur to the proposition and take it now in some other sense.

64. There is a difficulty which might well be avoided. It consists in mixing up the methods of procedure followed by speculation and ratiocination, when what is said of the subject has at one time the significance of its conceptual principle, and at another time the meaning of its predicate or accidental quality. The one mode of thinking invalidates the other; and only that philosophical exposition can manage to become plastic in character which resolutely sets aside and has nothing to do with the ordinary way of relating the parts of a proposition.

65. As a matter of fact, non-speculative thinking has its rights too, which are justifiable, but are disregarded in the speculative way of stating a proposition. Abolishing the form of the proposition must not take place only in an immediate manner, through the mere content of the proposition. On the contrary, we must give explicit expression to this cancelling process; it must be not only that internal restraining and confining of thought within its own substance; this turning of the

conception back into itself has to be expressly brought out and stated. This process, which constitutes what formerly had to be accomplished by proof, is the internal dialectical movement of the proposition itself. This alone is the concrete speculative element, and only the explicit expression of this is a speculative systematic exposition. *Qua* proposition, the speculative aspect is merely the internal restriction of thought within its own substance where the return of the essential principle into itself is not yet brought out. Hence we often find philosophical expositions referring us to the inner intuition, and thus dispensing with the systematic statement of the dialectical movement of the proposition, which is what we wanted all the while. The proposition ought to express what the truth is: in its essential nature the truth is subject: being so, it is merely the dialectical movement, this self-producing course of activity, maintaining, its advance by returning back into itself. In the case of knowledge in other spheres this aspect of expressly stating the internal nature of the content is constituted by proof. When dialectic, however, has been separated from proof, the idea of philosophical demonstration as a matter of fact has vanished altogether.

66. On this point it may be mentioned that the dialectical process likewise consists of parts or elements which are propositions. The difficulty indicated seems therefore to recur continually, and seems to be a difficulty inherent in the nature of the case. This is like what happens in the ordinary process of proving anything; the grounds it makes use of need themselves to be based on other grounds again, and so on *ad infinitum*. This manner of furnishing grounds and conditions, however, concerns that type of proof from which the dialectical movement is distinct and hence belongs to the process of external knowledge. As to what this movement is, its element is the bare concept; this furnishes a content which is through and through subject *impliciter* and *per se*. There is to be found, therefore, no sort of content standing in a relation, as it were, to an underlying subject, and getting its significance by being attached to this as a predicate. The proposition as it appears is a mere empty form.

Apart from the sensuously apprehended or ideally presented (*vorgestellten*) self, it is in the main the mere name *qua* name which denotes the subject pure and simple, the empty unit without any conceptual character. For this reason it would e.g. be expedient to avoid the name "God", because this word is not in its primary use a conception as well, but the special name of an underlying subject, its fixed resting-place; while, on the other hand, being or the one, singleness, subject, etc., themselves directly indicate conceptions. Furthermore, if speculative truths are stated about that subject [God], even then their content is devoid of the immanent notion, because that content is merely present in the form of a passive subject, and owing to this the speculative truths easily take on the character of mere edification.

From this side, too, the obstacle, arising from the habit of putting the speculative predicate in the form of a proposition, instead of taking it as an inherent essential conception, is capable of being made greater or less by the mere way philosophical truths are put forward. Philosophical exposition, faithfully following its insight into the nature of speculative truth, must retain the dialectical form, and exclude everything which is not grasped conceptually and is conception.

67. Just as much as in the procedure of ratiocination, the study of philosophy finds obstruction, too, in the unreasoning conceit that builds itself on well-established truths, which the possessor considers he has no need to return upon and reconsider, but rather takes to be fundamental, and thinks he can by means thereof propound as well as decide and pass sentence. In this regard, it is especially needful to make once again a serious business of philosophy. In all spheres of science, art, skill, and handicraft it is never doubted that, in order to master them, a considerable amount of trouble must be spent in learning and in being trained. As regards philosophy, on the contrary, there seems still an assumption prevalent that, though every one with eyes and fingers is not on that account in a position to make shoes if he only has leather and a last, yet everybody understands how to philosophize straight away, and pass judgment on philosophy, simply because he possesses the criterion for doing so in his natural reason - as if he did not in the same way possess the standard for shoemaking too in his own foot. It seems as if the possession of philosophy lay just in the want of knowledge and study, as if philosophy left off where the latter began. It is commonly held to be a formal kind of knowledge devoid of all substantial content. There is a general failure to perceive that, in the case of any knowledge, and any science, what is taken for truth, even as regards content, can only deserve the name of "truth" when philosophy has had a hand in its production. Let the other sciences try as much as they like to get along by ratiocination or *raisonnement* without philosophy, they are unable to keep alive without it, or to have any spiritual significance and truth in them.

18. Natural philosophizing as healthy common sense and as genius

68. As regards philosophy in its proper and genuine sense, we find put forward without any hesitation, as an entirely sufficient equivalent for the long course of mental discipline - for that profound and fruitful process through which the human spirit attains to knowledge - the direct revelation of the divine and the healthy common sense of mankind, unconcerned with and undisciplined by any other knowledge or by proper philosophical reflection. These are held to be a good substitute for real philosophy, much in the way that chicory is lauded as a substitute for coffee. It is not a very pleasing spectacle to observe uncultivated ignorance and

crudity of mind, with neither form nor taste, without the capacity to concentrate its thoughts on an abstract proposition, still less on a connected statement of such propositions, confidently proclaiming itself to be intellectual freedom and toleration, and even the inspiration of genius. This last used once upon a time, as everyone knows, to be all the vogue in the case of poetry, as it is now in philosophy. Instead of poetry, however, the efforts of this form of inspiration, when it had any sense at all, resulted in the production of trivial prose, or, if it went beyond that, it produced raving harangues. In the same way here in the case of philosophy; philosophizing by the light of nature, which thinks itself too good for conceptual thinking, and, because of the want of it, takes itself to have direct intuitive ideas and poetical thoughts, - such philosophizing trades in arbitrary combinations of an imagination merely disorganised through thinking - fictitious creations that are neither fish nor flesh, neither poetry nor philosophy.

69. On the other hand again, when instinctive philosophy follows the more secure course prescribed by healthy common sense, it treats us to a rhetorical *mélange* of commonplace truths. When it is charged with the triviality of what it offers, it assures us, in reply, that the fullness and richness of its meaning lie deep down in its own heart, and that others must feel this too, since with such phrases as the “heart’s natural innocence”, “purity of conscience”, and so on, it supposes it has expressed things that are ultimate and final, to which no one can take exception, and about which nothing further can be required. But the very problem in hand was just that the best must not be left behind hidden away in secret, but be brought out of the depths and set forth in the light of day. It could quite well from the start have spared itself the trouble of bringing forward ultimate and final truths of that sort; they were long since to be found, say, in the Catechism, in popular proverbs, etc. It is an easy matter to grasp such truths in their indefinite and crooked inaccurate form, and in many cases to point out that the mind convinced of them is conscious of the very opposite truths. When it struggles to get itself out of the mental embarrassment thereby produced, it will tumble into further confusion, and possibly burst out with the assertion that in short and in fine the matter is settled, the truth is so and so, and anything else is mere “sophistry” - a password used by plain common sense against cultivated critical reason, like the phrase “visionary dreaming”, by which those ignorant of philosophy sum up its character once for all. Since the man of common sense appeals to his feeling, to an oracle within his breast, he is done with any one who does not agree. He has just to explain that he has no more to say to any one who does not find and feel the same as himself. In other words, he tramples the roots of humanity underfoot. For the nature of humanity is to impel men to agree with one another, and its very existence lies simply in the explicit realisation of a community of conscious life. What is anti-human, the condition of mere animals, consists in keeping within the sphere of

feeling pure and simple, and in being able to communicate only by way of feeling-states.

70. When a man asks for a royal road to science, no more convenient and comfortable way can be mentioned to him than to put his trust in “healthy common sense”. And for the rest, to keep abreast of the times and advance with philosophy, let him read reviews of philosophical works, and even go the length of reading the prefaces and first paragraphs of the works themselves; for the latter give the general principles on which everything turns, while the reviews along with the historical notice provide over and above the critical judgment and appreciation, which, being a judgment passed on the work, goes farther than the work that is judged. This common way a man can take in his dressing-gown. But spiritual elation in the eternal, the sacred, the infinite, moves along the highway of truth in the robes of the high priests road that, from the first, is itself immediate being in its innermost, the inspiration of profound and original ideas and flashes of elevated thought. All the same, those depths do not yet reveal the well-spring of inner reality; nor, again, are these sky-rockets the empyrean. True thoughts and scientific insight can only be won by the labour of the notion. Conceptions alone can produce universality in the knowing process. This universality is critically developed and completely finished knowledge. It is not the common indefiniteness and inadequacy of ordinary intelligence. Nor, again, is it that extraordinary kind of universality where the powers and potencies of reason are spoiled and ruined by genius through indolence and self-conceit. It is truth which has successfully reached its own inherent native form. It is this universality which is capable of being the property of every self-conscious reason.

19. Conclusion: the author's relation to the public

71. Since I have taken the self-development of the notion to be the medium wherein science really exists, and since in those respects to which I have drawn attention, as well as in others, current ideas about the nature of truth and the shape it assumes deviate from my view, and indeed are quite opposed to my position, the consideration of this divergence of view does not seem to promise well for a favourable reception of an attempt to expound the system of science in this sense. In the meantime, I may call to mind that while e.g. the supreme merit of Plato's philosophy has sometimes been held to consist in his myths which are scientifically valueless, there have also been times, spoken of even as times of mere sentimental enthusiasm, when the Aristotelian philosophy has been respected on account of its speculative depth of insight, and when the *Parmenides* of Plato - perhaps the greatest literary product of ancient dialectic - has been taken to be the

positive expression of the divine life, the unveiling and disclosing of its inmost truth. I may reflect, too, that notwithstanding much cloudy obscurity which was the product of ecstasy, this misunderstood ecstasy was in point of fact meant to be nothing else than the activity of the pure notion; furthermore, that what is best in the philosophy of our time takes its value to lie in its scientific character; and that, even though others take a different view, it is only in virtue of its scientific character that recent philosophy really gains validity and acceptance. Thus, then, I may hope too that this attempt to justify the claim of science to be a conceptual process, and systematically to develop and present science in this its own peculiar medium, will manage to make a way for itself by the inherent truth of the result accomplished. We may rest assured that it is the nature of truth to force its way to recognition when the time comes, and that it only appears when its time has come, and hence never appears too soon, and never finds a public that is not ripe to receive it. And, further, we may be sure that the individual thinker requires this result to take place, in order to give him confidence in regard to what is no more as yet than a matter for himself singly and alone, and in order to find his assurance, which in the first instance merely belongs to a particular individual, realised as something universal. In this connection, however, it is very often necessary to distinguish the public from those who take upon themselves to be its representatives and spokesmen. The public takes up an attitude in many respects quite different from the latter, indeed, even opposed to them. Whereas the public good-naturedly and generously will rather take the blame upon itself when a philosophical work is not quite acceptable or intelligible to it, these "representatives", on the contrary, convinced of their own competence, put all the blame on the authors. The influence of the work on the public is more silent than the action of those "representatives", who are like the dead burying their dead. While the general level of insight at the present time is in the main more highly cultivated, its curiosity more quickened and alert, and its judgment more swiftly made up and pronounced, so that the feet of those who will carry you out are already at the door: at the same time we have often to distinguish from all this the slower and more gradual effect which rectifies the direction of attention caught and compelled by imposing assurances, corrects, too, contemptuous censure, and after a little provides a contemporary audience for one part, while another after a temporary vogue finds no audience with posterity any longer.

72. For the rest, at a time when the universal nature of spiritual life has become so very much emphasised and strengthened, and the mere individual aspect has become, as it should be, correspondingly a matter of indifference, when, too, that universal aspect holds, by the entire range of its substance, the full measure of the wealth it has built up, and lays claim to it all, the share in the total work of mind that falls to the activity of any particular individual can only be very small. Because

this is so, the individual must all the more forget himself, as in fact the very nature of science implies and requires that he should; and he must, moreover, become and do what he can. But all the less must be demanded of him, just as he can expect the less from himself, and may ask the less for himself.

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